

Please type a plus sign (+) inside this box.

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

of

8

Complete If Known

Application Number	
Filing Date	
First Named Inventor	Brad A. Armstrong
Group Art Unit	
Examiner Name	

Sheet

1

of

8

Attorney Docket Number

19...

09/18/01
10/12/01

U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
XG		5200597		Eastman	1993	
		5207426		Inoue	1993	
		5287089		Parsons	1994	
		5311729		Teruo	1994	
		5315204		Park	1994	
		5364108		Esnouf	1994	
		5365494		Lynch	1994	
		5376913		Pine	1994	
		5396235		Maeshima	1995	
		5440237		Brown	1995	
		5457478		Frank	1995	
		5640566		Victor	1997	
		5670955		Thorne	1997	
		5673237		Blank	1997	
		5675329		Barker	1997	
		5689285		Asher	1997	
		5764219		Rutledge	1998	
		5778404		Capps	1998	
		5790102		Nassima	1998	
		5847305		Yoshikawa	1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office ³	Number ⁴			
SG		DE	3031484	Gurndig	1982	
		DE	3543890	Thomson-Brant	1987	
		GB	2113920	Alps Electric	1983	
		GP	2058462	Shin-Etsu Polymer	1981	
		WO	957630	Schneider	1999	
		5-87760	Japan	Mitsumi Electric	1993	
		JP	7302159	Sega Enterprise	1995	

Examiner
Signature

gale

Date
Considered

4/30/02

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 15, if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

Complete If Known

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

8

Application Number

Filing Date

First Named Inventor

Brad A. Armstrong

Group Art Unit

Examiner Name

Attorney Docket Number

19...

U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ³ (if known)			
KA		5565891		Armstrong	1996	
		5589828		Armstrong	1996	
		5999084		Armstrong	1999	
		6102802		Armstrong	2000	
		6135886		Armstrong	2000	
		6198473		Armstrong	2001	
		6208271		Armstrong	2001	
		6222525		Armstrong	2001	
		3611068		Fujita	1971	
		3806471		Mitchell	1974	
		3952173		Tsuiji	1976	
		3988556		Hyodo	1976	
		4224602		Anderson	1980	
		4313113		Thornburg	1982	
		4315238		Eventoff	1982	
		4552360		Bromley	1985	
		4673919		Kataoka	1987	
		4786895		Castaneda	1988	
		4866542		Shimada	1989	
		5164697		Kramer	1992	

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴				
KA			wo9532776	Namco	1995		
			ep1080753	Namco	2001		
			jp6154422	Namco	1994		
			jp9218737	Namco	1997		
			ep1080753	Namco	2001		
			ep0337458	Namco	1989		
			ep0337458	Namco	1989		
			jp7281824	Namco	1995		
			ep0470615	Nintendo	1992		
			ep0579448	Texas Instruments	1994		

Examiner
SignatureDate
Considered

4/30/02

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<p>Substitute for form 1448A/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p><i>(use as many sheets as necessary)</i></p>				<p>Complete If Known</p>	
				Application Number	
				Filing Date	
				First Named Inventor	Brad A. Armstrong
				Group Art Unit	
				Examiner Name	
Sheet	3	of	8	Attorney Docket Number	19.11

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁸
		Office ³	Number ⁴	Kind Code ⁵ (if known)			
			jp11031606		Teikoku	1999	
			jp09223607		Teikoku	1997	
			jp09213168		Teikoku	1997	
			DE19606408		Contelec	1997	
			GB2308448		Samsung	1997	
			RU2010369		Smyslov	1994	
			GB2267392		Collins	1993	
			jp05151828		Yokohama	1993	
			jp04155707		Yokohama	1992	
			jp03108701		Canon	1991	

Questel-Orbit data continued on next sheet

Examiner Signature		Date Considered	4/30/22
-----------------------	---	--------------------	---------

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1448A/PTO				Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	
				Filing Date	
				First Named Inventor	Brad A. Armstrong
				Group Art Unit	
				Examiner Name	
Sheet	4	of	8	Attorney Docket Number	19.1

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	4/30/02
-----------------------	---	--------------------	---------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<p>Substitute for form 1449B/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p><i>(use as many sheets as necessary)</i></p>				<p>Complete If Known</p>	
Sheet	6	of	8	Application Number	
				Filing Date	
				First Named Inventor	Brad A. Armstrong
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	19.../

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
V		Vol. 20 No. 5 Oct. 1977 S.F. KAMBIC, IBM Technical Disclosure Bulletin,	
C		<u>Questel-Orbit QWEB Pages 1-24 (submitted herewith)</u>	

Examiner Signature		Date Considered	4/30/02
--------------------	---	-----------------	---------

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<p>Substitute for form 1449A/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p><i>(use as many sheets as necessary)</i></p>				<p>Complete If Known</p>	
				Application Number	
				Filing Date	
				First Named Inventor	Brad A. Armstrong
				Group Art Unit	
				Examiner Name	
Sheet	7	of	8	Attorney Docket Number	19.1

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	---	--------------------	---

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		<i>Complete if Known</i>			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number			
(use as many sheets as necessary)		Filing Date			
		First Named Inventor	Brad A. Armstrong		
		Group Art Unit			
		Examiner Name			
Sheet	8	of	8	Attorney Docket Number	19.2

09/18/01

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Signature		Date Considered	4/30/02
-----------------------	---	--------------------	---------

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.